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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,967

09/15/2005

George Janini

NIHA-0194

9010

45160 7590 07/29/2008

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EXAMINER

SMYTH, ANDREW P

ART UNIT

PAPER NUMBER

2881

MAIL DATE

DELIVERY MODE

07/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/529,967	<b>Applicant(s)</b> JANINI ET AL.	
	<b>Examiner</b> ANDREW SMYTH	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) 34-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,9-14,16-18,22-27,29-33,63,65-67 and 71-77 is/are rejected.
- 7) ☒ Claim(s) 2,6-8,15,19-21,28,64 and 68-70 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/20/2006</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Response to Amendment*

1. Claims 1-33 and 63-77 drawn from group I, were elected from restriction requirement.
2. Claims 35-62 withdrawn.

### *Claim Objections*

1. Claims 2, 6-8, 15, 19-21, 28, 64, and 68-70 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 9, 11, 13-14, 16-18, 22, 24, 26-27, 29-33, 63, 65-66, 67, 71, and 73-77 are rejected under 35 U.S.C. 102(b) as being anticipated by Schultz et al. (US 6,633,031 ).

Schultz discloses the following:

Regarding applicant's claim 1 and 14, and 63. (Original) An electrospray source, comprising:  
a contiguous capillary for separating and electrospraying a fluid comprising analyte and

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electrolyte (column 4, lines 40-67), said contiguous capillary comprising:  
a spray tip (104) at one end of said capillary (figure 3C, 122); and  
an electrically conductive portion of the capillary in proximity to said spray tip (120, 118)  
, said electrically conductive portion capable of blocking passage of analyte  
therethrough (column 16, line 65 to column 17, line 29).

Regarding applicant's claim 27. (Original) An apparatus for conveying analyte ions  
into an analytical instrument, the apparatus comprising:  
a contiguous capillary, comprising:  
an inlet end to supply a fluid into the capillary (106) , said fluid comprising analyte and  
electrolyte;  
a spray tip (104) to spray fluid out of the end of the capillary that is opposite to the inlet  
end; and  
an electrically conductive portion of the capillary in proximity to said spray tip (122) ,,  
said electrically conductive portion capable of blocking passage of analyte therethrough  
(column 16, line 65 to column 17, line 29);  
an electrode exterior (132) to said electrically conductive portion, said electrode being in  
electrically conductive contact with the fluid interior to said electrically conductive  
portion;  
a spray counter-electrode (54) in proximity to said spray tip, said spray counter-  
electrode comprising an opening in fluid communication with the analytical instrument;  
and  
a power supply (figure 3G, V Extract) connected to the electrode and the spray counter-

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electrode, said power supply providing a spray voltage for generating an electrospray comprising analyte ions, whereby at least a portion of the analyte ions are conveyed through said opening and into the analytical instrument (column 1, lines 42-50).

Regarding applicant's claim 3., 16, 29, and 65 (Original) The electrospray source of claim 1, wherein the electrically conductive portion is electrolytically conductive (column 16, lines 34-50).

Regarding applicant's claim 4, 17, and 66. (Original) The electrospray source of claim 1, wherein the contiguous capillary comprises fused silica (column 4, lines 40-67).

Regarding applicant's claim 5, 18, and 67. (Original) The electrospray source of claim 1, wherein the spray tip has an opening smaller than about 50 microns. (column 4, lines 40-67).

Regarding applicant's claim 9, 22, and 71. (Original) The electrospray source of claim 1, wherein the electrically conductive portion is affixed within a support structure, said support structure capable of holding a buffer solution (figure 3, 3).

Regarding applicant's claim

Regarding applicant's claim 11, 24, and 73. (Original) The electrospray source of claim 1, wherein the electrically conductive portion of the capillary has a wall thickness less than the wall thickness of the adjacent capillary portion (figure 3C, 122, 120, 118).

Regarding applicant's claim 13, 26, and 75. (Original) The electrospray source of claim 1, wherein the diameter of the spray tip opening is smaller than inside diameter of the capillary (figure 3E, 52, 106).

Regarding applicant's claim 30. (Original) The apparatus of claim 27, further comprising:  
a second electrode (figure 3G, V fluid) in electrically conductive contact with fluid upstream from the electrically conductive portion of the capillary; and  
a second power supply to produce an electrophoresis voltage between the electrode and said second electrode to effect electrophoresis separation of the analytes within the capillary.

Regarding applicant's claim 31. (Original) The apparatus of claim 27, wherein the second electrode is in electrolytically-conductive contact with the fluid adjacent to the inlet end of the capillary (column 16, lines 34-50).

Regarding applicant's claim 32. (Original) The apparatus of claim 27, wherein the capillary further comprises a second electrically conductive portion through which the second electrode is in electrically conductive contact with the fluid, said second electrically conductive portion being located upstream or downstream from the first electrically conductive portion (figure 3G, V fluid).

Regarding applicant's claim 33. (Original) The apparatus according to claim 27, wherein the analytical instrument is a mass spectrometer or a mass analyzer (column 1, lines 42-50).

Regarding applicant's claim 76. (Original) The contiguous capillary of claim 63, wherein the electrically conductive portion extends about 20 percent to about 50 percent around the circumference of the capillary (figure 3G, 122).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10, 23, and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al. (US 6,633,031 ).

In regards to claims 10, 23, and 72, Schultz et al. differs from the claimed invention by not showing the electrically conductive portion of the capillary comprises at least about 1 mm of the length of the capillary. It would have been obvious to one having ordinary skill in the art at the time the invention was made for the electrically conductive portion of the capillary comprises at least about 1 mm of the length of the capillary, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d272, 205 USPQ 215 (CCPA 1980).

5. Claims 12, 25, and 74 rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al. (US 6,633,031 ).

In regards to claims 12, 25, and 74, Schultz et al. differs from the claimed invention by not showing the wall thickness of the electrically conductive portion of the capillary is less than about 50 microns.. It would have been obvious to one having

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ordinary skill in the art at the time the invention was made for wall thickness of the electrically conductive portion of the capillary is less than about 50 microns., since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

### *Conclusion*

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent prior art is closely related art that individually or in combination could be considered grounds for rejection. See references cited for a listing of the pertinent prior art found and the prior art found.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Smyth whose telephone number is 571-270-1746. The examiner can normally be reached on 7:30AM - 5:00PM; Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jack I. Berman/

Primary Examiner, Art Unit 2881

/A. S./

Examiner, Art Unit 2881